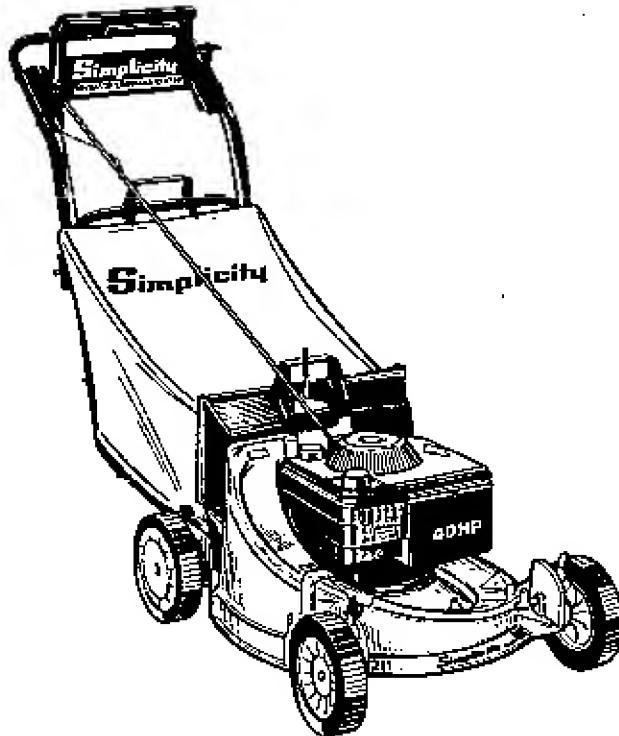


**Parts
Manual**

**1500 Series
Walk-Behind Mowers
and Attachments**



MODEL 1510PS
MFG. NO. 1691725

MODEL 1520PP
MFG. NO. 1691726

MODEL 1550ZS
MFG. NO. 1691727

MODEL 1550BBC
MFG. NO. 1691728

MODEL 1550ES
MFG. NO. 1691729

21" SIDE DISCHARGE KIT
MFG. NO. 1691730

20" REAR GRASS BAG
MFG. NO. 1691731

TP-1140
PRINTED IN U.S.A.
2/89

Simplicity®

Product Identification:

When ordering parts, keep your products serial number and manufacturer's number in mind. Variations may occur in a part between early and later model products, causing the product serial number to be listed in the parts description whenever these variations occur.

Record your I.D. numbers here for quick, future reference.

Product Mfg. No. _____ S/N _____ Mower Mfg. No. _____ S/N _____

Attention:

Standard torques appear in a chart at the end of the manual, while important individual torques are given on specific parts drawings.

CRITICAL and **MAJOR** notations point out important facts or instructions which relate to personal safety and proper machine operation. Any **CRITICAL** notation  which may appear in this book, pinpoints characteristics which, if not properly followed, can create a safety hazard. Any **MAJOR** notation  which may appear in this book, marks characteristics which, if not properly followed, may result in operating failure, shortened product life, or greatly reduced quality of the unit.

For your convenience, assembly notes are included in parts drawings to assist in repair and assembly of unit.

NOTE: Specifications may change without notice.

SIMPLICITY PRODUCTS FOR THE PROPER CARE OF EQUIPMENT

These genuine Simplicity products will help the owner extend the life of his equipment.

OILS - SPECIFICALLY BLENDED OF HIGH QUALITY BASE OILS & ADDITIVES.

Special Worm Gear (Roticul) Oil for use in all tillers and snowthrowers with worm gear auger drive. Required for protection of brass gears and mating parts. Case of 12 Quarts, Part #1685100, Individual Quarts 118065.

Multi-Purpose Hydraulic/Transmission Oil for use in most hydraulic applications, and hydrostatic and gear transmissions. Specific Simplicity applications: All hydrostatic transmissions, all bevel gear cases, all Broadmoor, Landlord, Sovereign, 4000, 5000, 7000 transmissions (except Peerless Gear Transmissions). (Not used in SunStar tractor transmission.) Case of 12 Quarts, Part #1685516, 2½ Gallon Container, Part #1685539.

2-Cycle Engine Oil, a premium lubricant for all 2-cycle air-cooled engines. Case of 12 Part #1685517.

SAE 5W 30 SF/CD Cold Weather Engine Oil for use in all four cycle and diesel engines at 30° temp. and under. Case of 12 Quarts, Part # 1685576.

SAE 15W40 SF/CD Engine Oil for gas and diesel engines, warm weather; see engine manufacturer recommendations. Case of 12 Quarts, Part #1685554.

Grease Gun Kit has 12" flexible hose to get into tight spots with ease. Kit contains: gun and 1-8 oz. tube of grease, Part #1685510. For replacement tube, order Part # 103077.

Pneumatic Tire Seal, seals all leaks including bead leaks and punctures up to 3/16 inch diameters. Prevents flats for tread life of tire. Available in following amounts.

Case of 12 - 11 Oz. Tubes 1685537
Case of 24 - 11 Oz. Tubes 1685525
5 Gallon Pail 1685527

Touch-Up Paint keeps equipment in showroom condition.

Spray Cans	Quarts	Daubers 12/Ctn.
*Simplicity Orange - 103262 (12 cans/1685179)	1685037	1685520 - Mixed (6 Simp. Orange, 6 White)
**Classic Orange - 1685558 (12 cans/1685559)	1685560	1685562 - Mixed (6 Classic Orange, 6-White)
White 103049 (12 cans/1685178)	1685032	1685562 - Mixed (6-Classic Orange, 6-White) 1685520 - Mixed (6-Simp. Orange, 6-White)
Black - 1685551 (12 Cans/1685552)	N.A.	N.A.

*For 1977 thru early 1985 products.
**For products produced after 12/1/85.

Simplicity Designer Seat Covers are double stitched, easy care vinyl. Keeps new seats new, makes worn seats look new.

• Small Cover for 4000, 5000, & 5100 Tractors	1685540
• Large Cover for 6200, 7000 & 9000 Tractors	1685541
• SunStar Seat Cover	1685577

Extend Equipment Life - Use Only Genuine Simplicity Parts

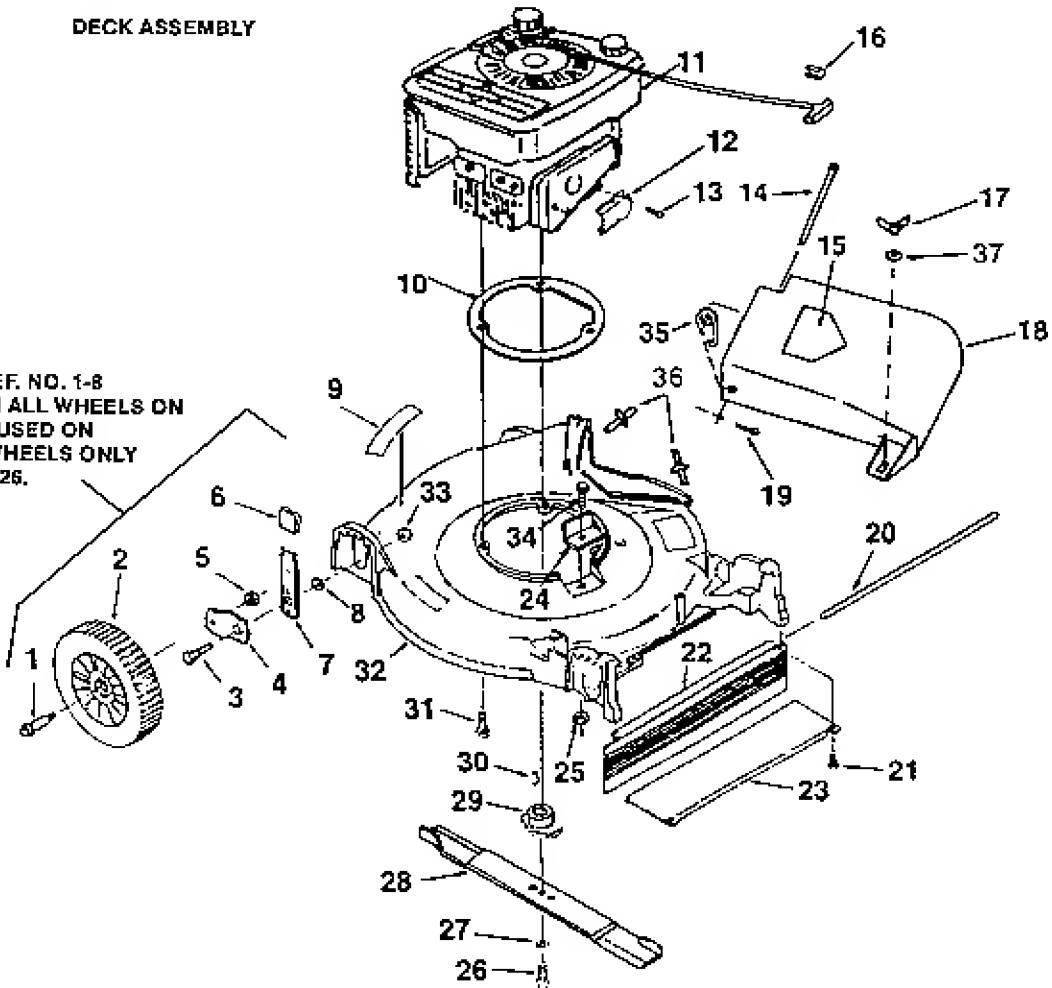
Table of Contents

MFG. NO.	DESCRIPTION	PAGE NO.
1691725	MODEL 1510PS (PUSH)	
1691726	MODEL 1520PP (POWER-PROPELLED)	
	Engine and Mower Deck Group	2
	Rear Wheel Group (Mfg. No. 1691726 Only)	8
	Handle and Controls Group	12
	Gear Reducer Group (Mfg. No. 1691726 Only)	18
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	Handle and Controls Group	16
	Gear Reducer Group	18
	21" Rear Grass Bag Group	22

NOTE: 21" Side Discharge Chute is sold under wholegoods part no. 1691730.

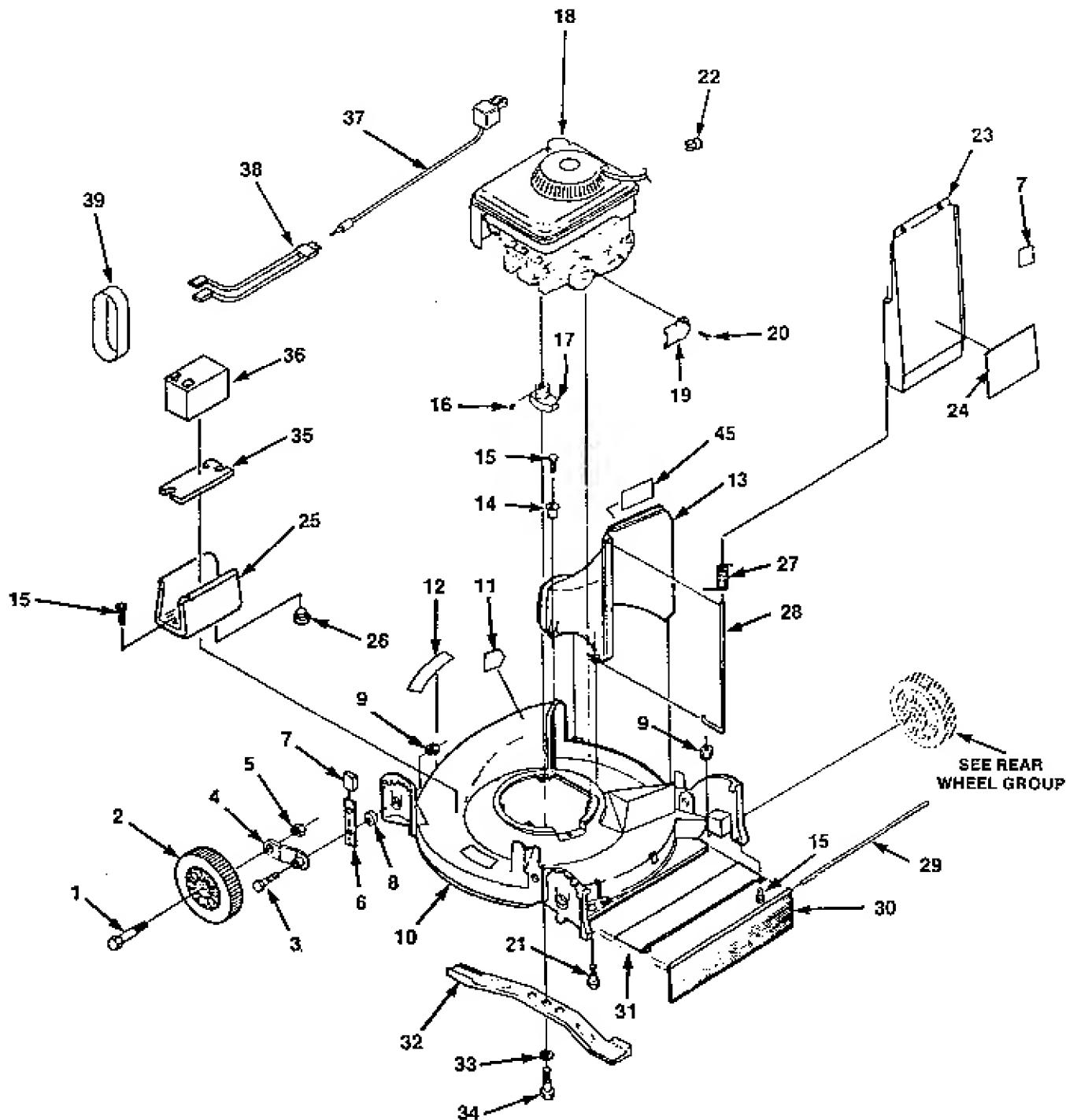
DECK ASSEMBLY

NOTE: REF. NO. 1-8
USED ON ALL WHEELS ON
1691725; USED ON
FRONT WHEELS ONLY
ON 1691726.



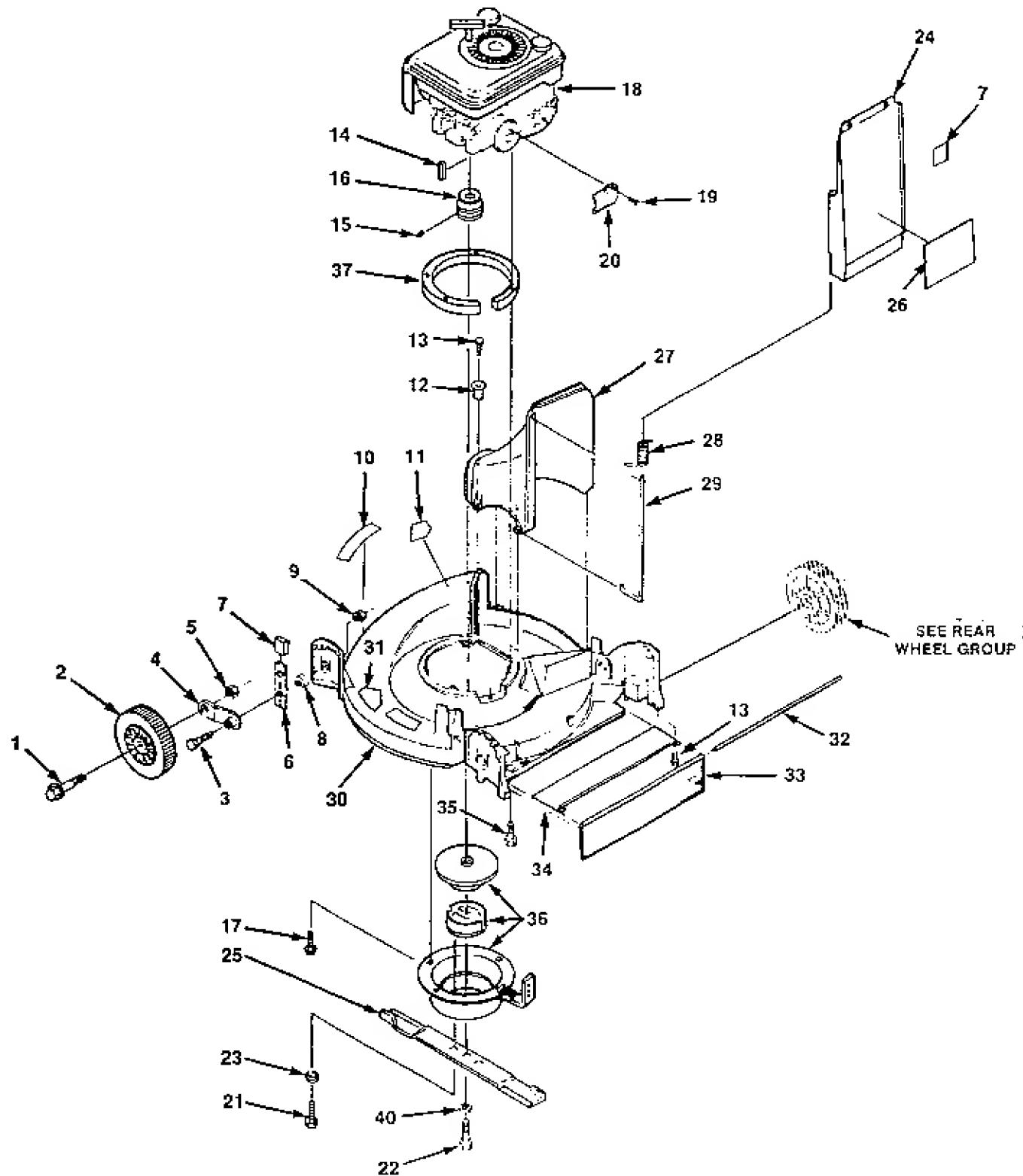
Ref. No.	Part No.	Qty.	Description
1	1612462	4*	BOLT & NUT ASSY. (Incl. Ref. No. 5)
2	1612423	4*	WHEEL & TIRE (Qty. 2, Mfg. No. 1691726)
3	1612235	4*	BOLT, Hex Hd., 5/16-18 (Qty. 2, Mfg. No. 1691726)
4	1612346	4*	ARM, Wheel Adjusting (Qty. 2, Mfg. No. 1691726)
5	1612278	4*	NUT, Hex, 3/8-16
6	1612215	4	KNOB
7	1612305	4*	SPRING
8	1612225	4*	SPACER
9	1612183	1	DECAL, 20"
10	1612410	1	RING, Engine
11		1	ENGINE, 3.5 H.P.
12	1612236	1	DEFLECTOR
13	1612266	3	SCREW, Hex Hd., 8-32 x 3/8"
14	1612386	1	PIN, Hinge
15	1612219	1	DECAL, Warning
16	1612319	1	ROPE STOP
17	1612453	1	NUT, Wing
18	1612391	1	CHUTE & LATCH ASSY.
19	1918447	1	PIN, Cotter, 3/32 x 3/4"
20	1612244	1	ROD
21	1612264	2	SCREW, Hex Washer
22	1612217	1	FLAP, Drag
23	1612218	1	COVER, Rear (Mfg. No. 1691725 Only)
24	1612345	1	COVER, Belt Opening (Mfg. No. 1691725 Only)
25	1612277	1	NUT, Hex, 1/4-20
26	1612260	1	SCREW, Hex Hd., 3/8-24 x 1"
27	1612281	1	WASHER, Lock, 3/8"
28	1612154	1	BLADE
29	1612356	1	ADAPTOR
30	1612295	1*	KEY
31	1612263	3	SCREW, Hex Hd., 3/8-16 x 1-1/2"
32	1612414	1	DECK (Mfg. No. 1691725)
	1612415	1	DECK (Mfg. No. 1691726)
33	1612280	4	NUT, Flange, 5/16-18
34	1612253	1	SCREW, Hex Hd., 1/4-20 x 1/2" (Mfg. No. 1691725 Only)
35	1612243	1	SPRING CLIP
36	1612387	2	STUD
37	1612454	1	WASHER, Flat, 1/4"

*Qty. 2 Used On Mfg. No. 1691726

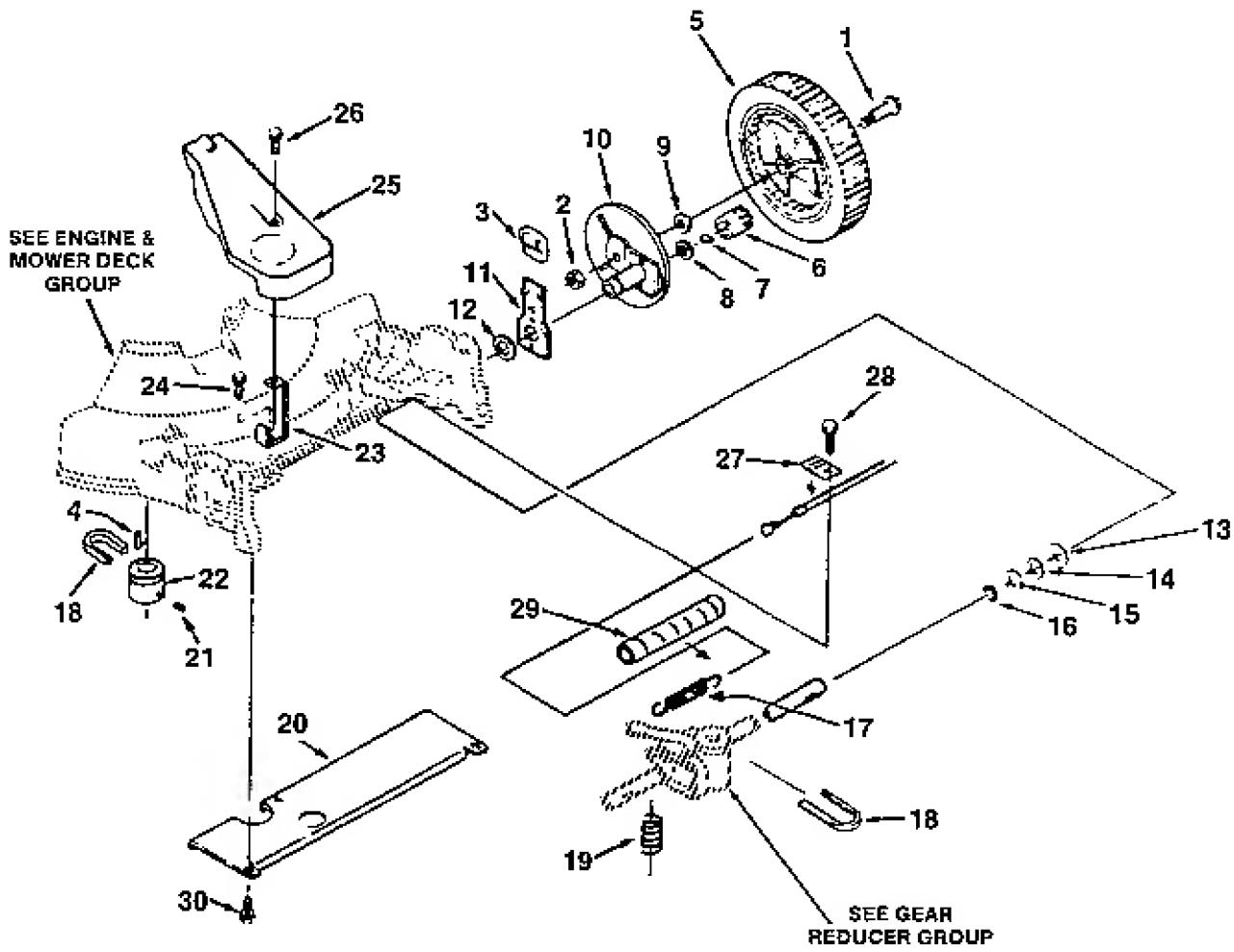


Ref. No.	Part No.	Qty.	Description
1	1612462	4	BOLT & NUT ASSY. (Incl. Ref. No. 5)
2	1612423	2	WHEEL & TIRE
3	1612235	2	BOLT, Hex Hd., 5/16-18
4	1612346	2	ARM, Wheel Hgt. Adj.
5	1612278	4	NUT, Hex, 3/8-24
6	1612305	2	SPRING, Index
7	1612215	4	KNOB, Indexing Spring
8	1612225	2	SPACER, Index Spring
9	1612280	2	NUT, Flange, 5/16-18
10	1612416	1	DECK, 21" (Incl. Ref. No. 11 and 12)
11	1612182	1	DECAL, 21"
12	1612219	1	DECAL, Warning
13	1612343	1	CHUTE, Discharge (Incl. #14)
14	1612301	3	EYELET, Simpson
15	1612264	8	SCREW, Hex Hd., 1/4-20 x 3/4
16	1612297	1	KEY, 5/8 x 6/32
17	1612331	1	ADAPTER, Blade
18		1	ENGINE, 4 H.P.
19	1612236	1	DEFLECTOR, Muffler
20	1612266	3	SCREW, Hex Hd., 8-32 x 3/8
21	1612263	3	SCREW, 3/8-16 x 1-1/2
22	1612319	1	STOP, Rope
23	1612401	1	DOOR, Chute (Incl. #24)
24	1612400	1	DECAL, Door
25	*1612341	1	HOLDER, Battery
26	*1612330	1	BUMPER
27	1612384	1	SPRING, Door
28	1612229	1	PIN, Hinge
29	1612232	1	ROD, Drag Flap
30	1612237	1	FLAP, Drag
31	1612344	1	COVER, Rear
32	1612155	1	BLADE, 21"
33	1612282	1	WASHER, Lock 7/16
34	1612332	1	BOLT, Shoulder
35	*1612342	1	PAD, Battery
36	*1612159	1	BATTERY, 12 Volt
37	*1612368	1	CHARGER, Battery
38	*1612335	1	LEAD, Battery
39	*1612349	2	STRAP, Rubber

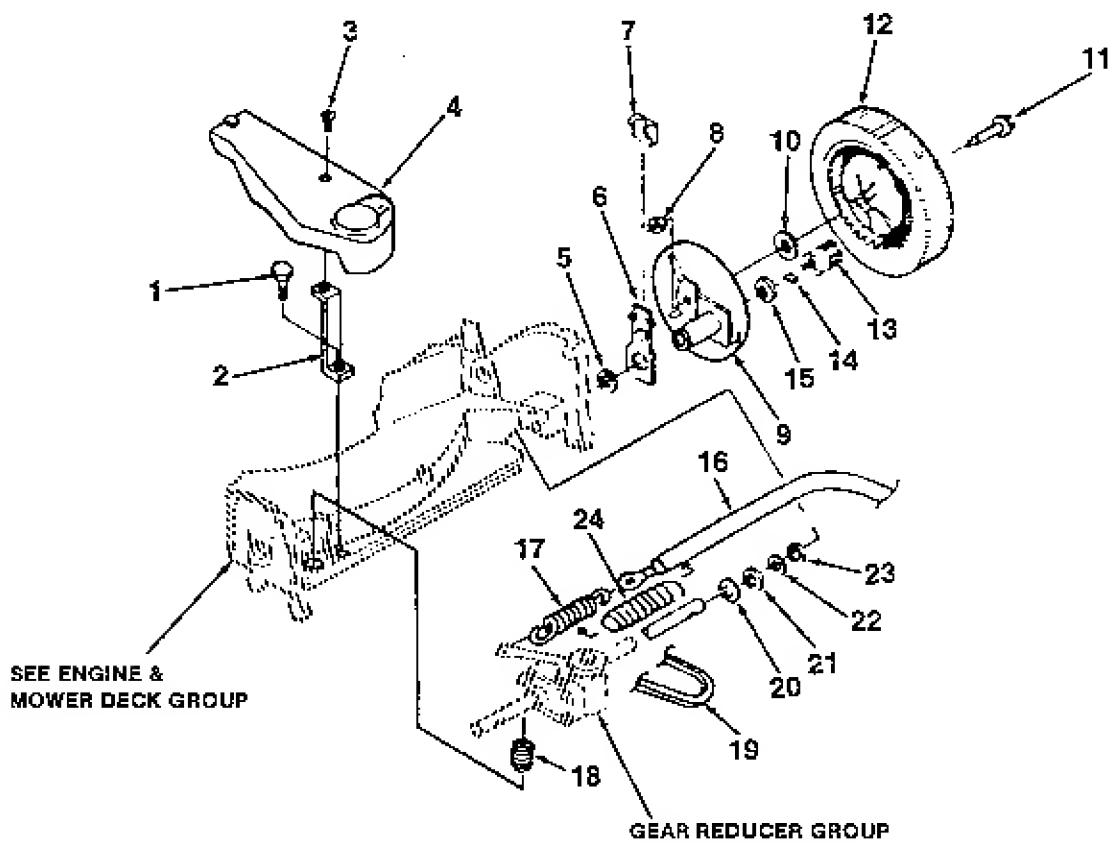
*Used On Mfg. No. 1691729 Only



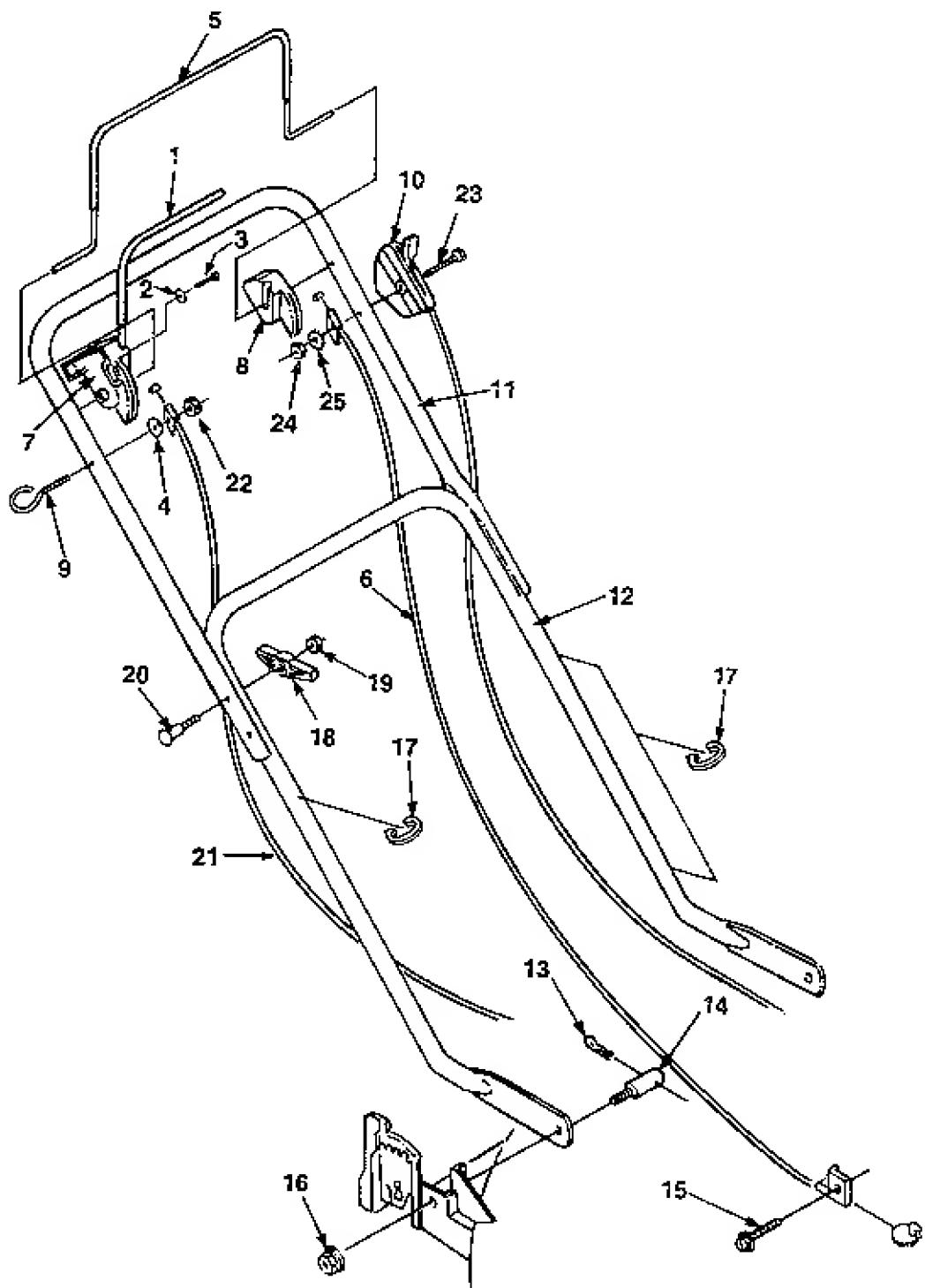
Ref. No.	Part No.	Qty.	Description
1	1612462	4	BOLT & NUT ASSY. (Incl. Ref. No. 5)
2	1612423	2	WHEEL & TIRE ASSY.
3	1612235	2	BOLT
4	1612346	2	ARM, Wheel Hgt. Adj.
5	1612278	4	NUT, 3/8-24
6	1612305	2	SPRING
7	1612215	4	KNOB
8	1612225	2	SPACER
9	1612280	2	NUT, Flange, 5/16-20
10	1612182	1	DECAL, 21"
11	1612219	1	DECAL, Warning
12	1612301	3	EYELET, Simpson
13	1612264	6	SCREW, 1/4-20 x 3/4
14	1612297	2	KEY, 5/8 x 5/32
15	1612272	1	SCREW, Set, 8/32
16	1612328	1	PULLEY, Drive
17	1612271	3	SCREW, 5/16-18
18		1	ENGINE, 4.0 H.P.
19	1612266	3	SCREW, #8-32 x 3/8
20	1612236	1	DEFLECTOR
21	1612256	2	SCREW, 3/8-16 x 1
22	1612257	1	SCREW, 3/8-24 x 2
23	1612261	3	WASHER, Lock, 3/8
24	1612401	1	DOOR, Chute (Incl. Ref. No. 26)
25	1612156	1	BLADE, 21"
26	1612400	1	DECAL, Door
27	1612343	1	CHUTE (Incl. Ref. No. 12)
28	1612384	1	SPRING
29	1612229	1	PIN, Hinge
30	1612417	1	DECK ASSY. (Incl. Decals)
31	1612371	1	DECAL, Foot Pad
32	1612232	1	ROD, Drag Flap
33	1612237	1	FLAP, Drag
34	1612344	1	COVER
35	1612268	4	SCREW, 3/8-16 x 2-1/4
36	1612325	1	BLADE/BRAKE/CLUTCH
37	1612339	1	RING, Engine



Ref. No.	Part No.	Qty.	Description
1	1612385	2	BOLT
2	1612280	4	NUT, Flange, 5/16-18
3	1612215	2	KNOB
4	1612295	1	KEY
5	1612398	2	WHEEL & TIRE ASSY.
6	1612208	1	PINION, R.H.
	1612209	1	PINION, L.H.
7	1612213	2	PAWL
8	1612222	2	WASHER
9	1612242	2	WASHER
10	1612304	2	DRIVE WHEEL SUPPORT ASSY.
11	1612347	2	INDEXING SPRING & PIN ASSY.
12	1612228	2	SPACER
13	1612286	2	WASHER
14	1612223	AR	WASHER
15	1612214	2	WASHER, Shim
16	1612288	2	RING, Eaton
17	1612246	1	SPRING, Extension
18	1612157	1	BELT, Drive
19	1612239	1	SPRING, Compression
20	1612408	1	COVER, Rear
21	1960348	1	SETSCREW
22	1612392	1	PULLEY, Drive
23	1612412	1	BRACKET, Gear Box Cover
24	1612262	1	SCREW, Sems Thd., 1/4-20 x 9/16"
25	1612334	1	COVER, Drive
26	1612265	1	SCREW, 1/4-20 x 3/4"
27	1612326	1	CLAMP, Cable
28	1927429	1	SCREW, 1/4-20 x 5/8"
29	1612323	1	COVER, Spring
30	1612264	2	SCREW, Hex Hd., 1/4-20 x 3/4"



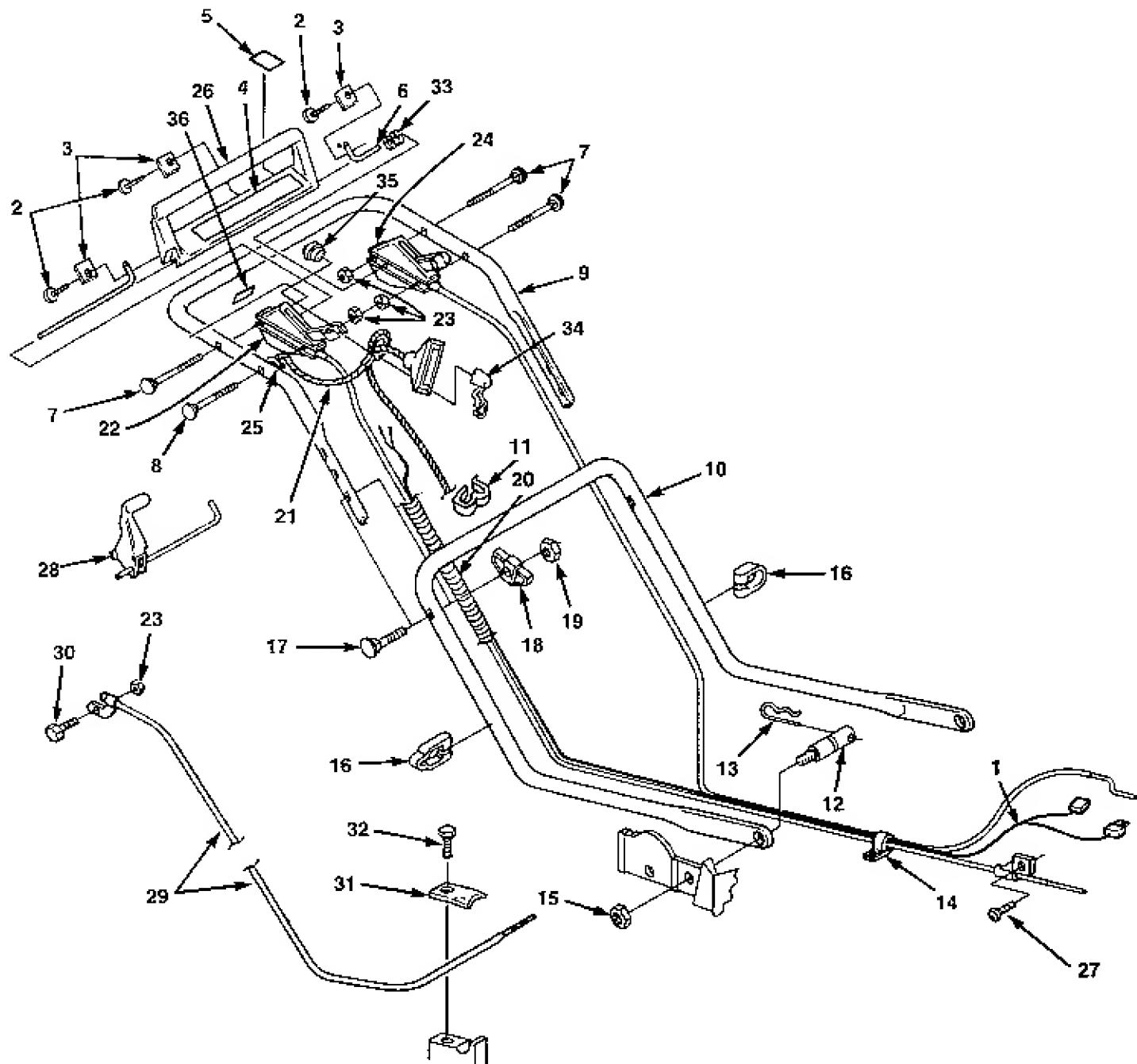
Ref. No.	Part No.	Qty.	Description
1	1612269	1	SCREW, Hex Hd., 10-16 x 1/2
2	1612406	1	SUPPORT
3	1612265	1	SCREW, 1/4-20 x 3/4
4	1612411	1	COVER, Drive (Mfg. No. 1691727, 1691729 Only)
	1612405	1	COVER, Clutch (Mfg. No. 1691728 Only)
5	1612228	2	SPACER
6	1612347	2	SPRING, Index
7	1612215	2	KNOB
8	1612278	4	NUT, 3/8-16
9	1612304	2	SUPPORT, Drive Wheel
10	1612242	2	WASHER
11	1612462	4	BOLT & NUT ASSY. (Incl. Ref. No. 6)
12	1612398	2	WHEEL & TIRE
13	1612203	1	PINION, R.H.
	1612209	1	PINION, L.H.
14	1612213	2	PAWL, Pinion
15	1612222	2	WASHER
16	1612327	1	CABLE, Traction
17	1612246	1	SPRING, Extension
18	1612239	1	SPRING, Compression
19	1612158	1	BELT, Drive
20	1612288	2	RING, Eaton
21	1612223	2	WASHER
22	1612214	AR	WASHER (Use as Shim)
23	1612286	2	WASHER
24	1612240	1	COVER, Spring



Ref. No.	Part No.	Qty.	Description
1	1612404	1	TRACTION LEVER
2	1612284	1	WASHER, Flat, 1/4"
3	1612269	1	SCREW, Hex Hd., 10-16 x 1/2"
4	1612221	1	WASHER
5	1612359	1	BAIL, Brake Control
	1612360	1	BAIL, Brake Control
6	1612362	1	CONTROL, Manual Start
7	1612364	1	ACTUATOR, R.H.
8	1612365	1	ACTUATOR, L.H.
9	1612366	1	EYEBOLT, 1/4-20 x 1-3/4"
10	1612396	1	CONTROL, Throttle
11	1612361	1	HANDLE, Upper
12	1612372	1	HANDLE, Lower
13	1612291	2	PIN, Cotter
14	1612233	2	STUD
15	1612259	1	SCREW, 10-24 x 1/2"
16	1612280	2	NUT, Flanged, 5/16-18
17	1612407	3	CLAMP, Cable
18	1612220	2	KNOB, Handle
19	1917372	2	NUT, Hex, 5/16-18
20	1960273	2	BOLT
21	1612363	1	CABLE, Traction Control
22	1612277	1	NUT, Hex, 1/4-20
23	1612397	1	BOLT
24	1916621	1	NUT, Hex, 1/4-20
25	1921880	1	WASHER, External Tooth, 1/4"

*Used on Mfg. No. 1691726

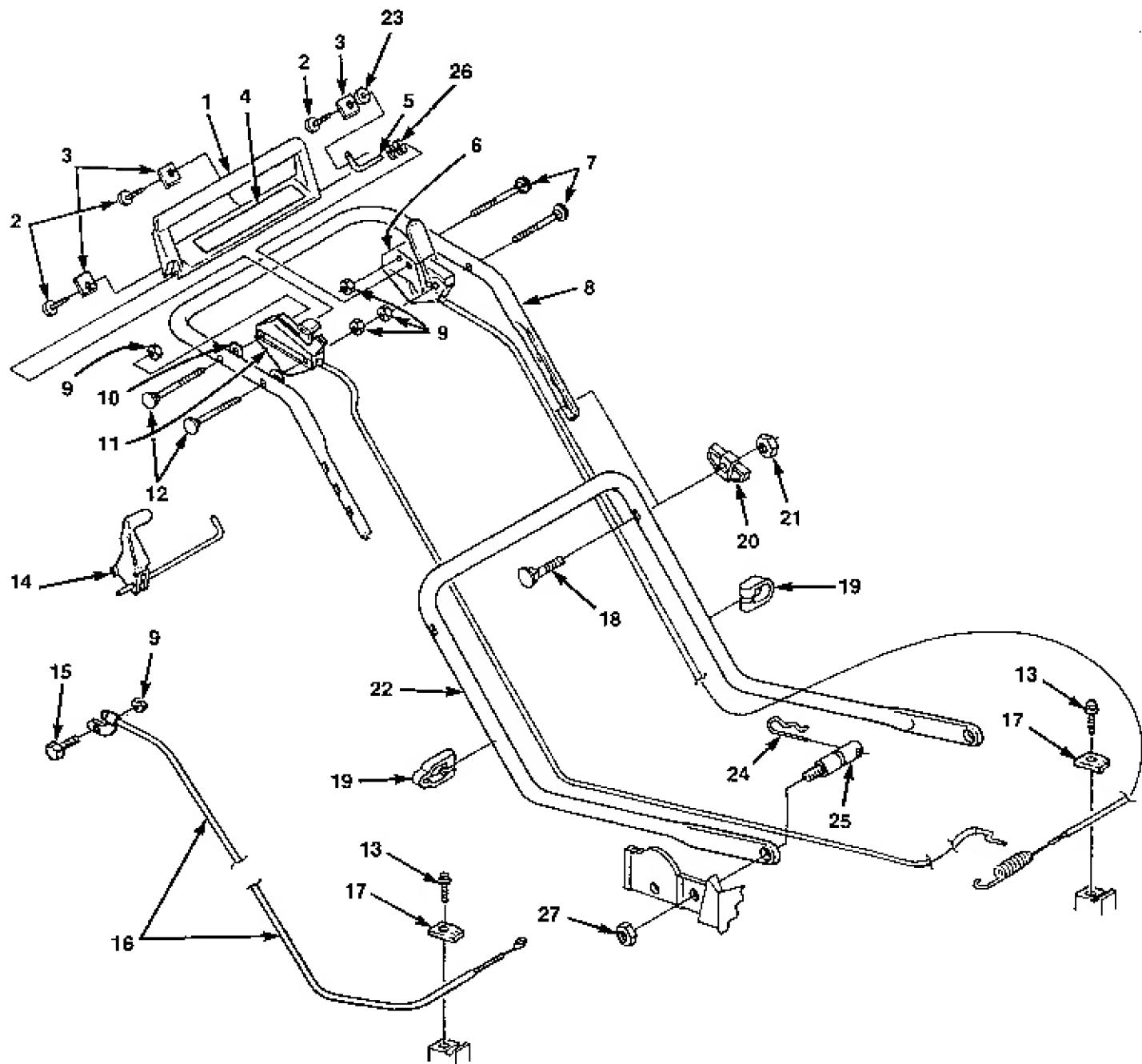
**Used on Mfg. No. 1691725



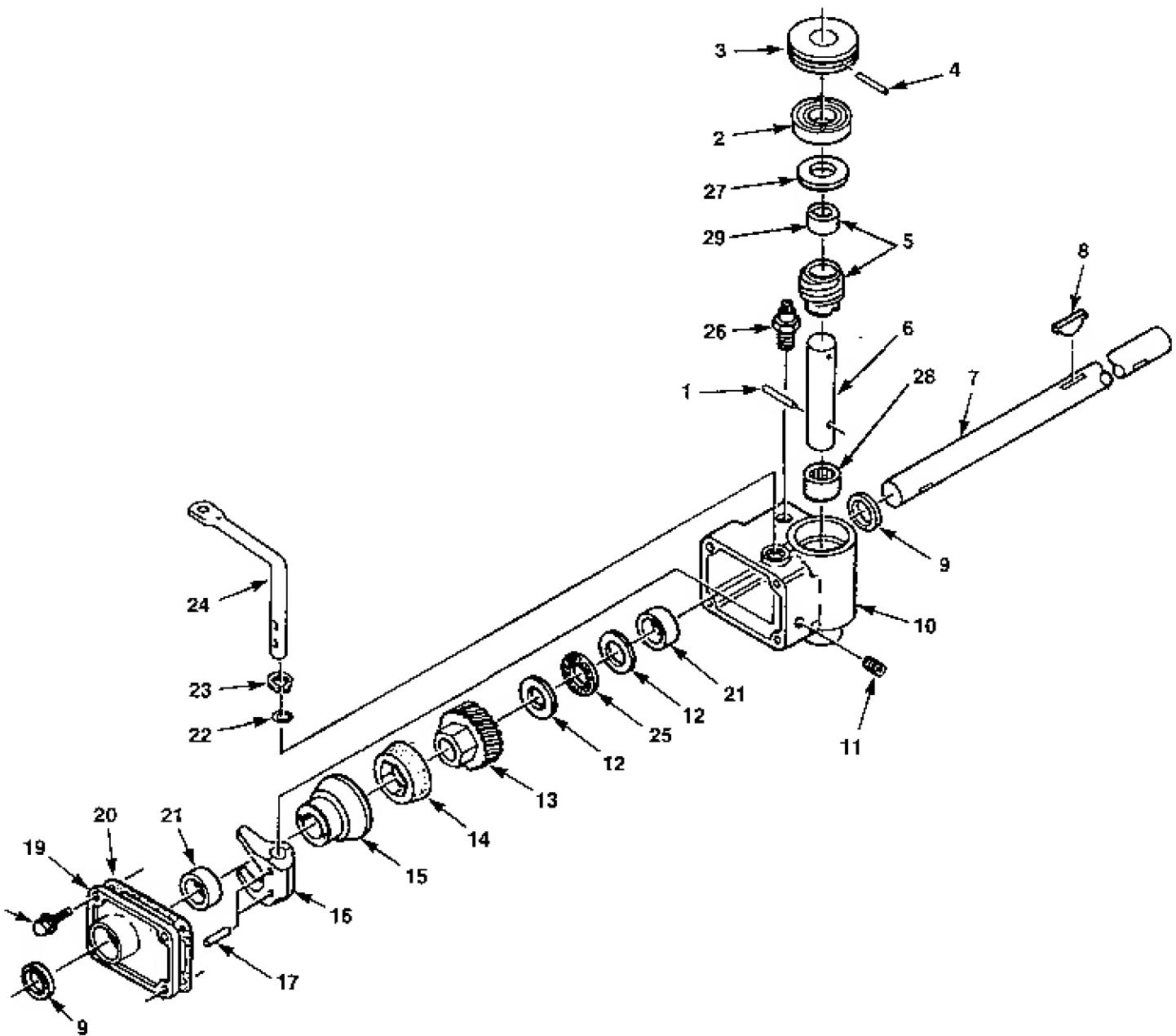
Ref. No.	Part No.	Qty.	Description
1	*1612336	1	WIRING HARNESS
2	1612267	3	SCREW, Rd. Hd., 1/4-10 x 5/8
3	1612375	3	CLAMP, Pivot Shaft
4	1612181	1	DECAL, Brake Bail
5	1612399	1	DECAL, Blade Rotation
6	1612374	1	SHAFT, Pivot (Short)
7	1931323	3	BOLT, Sq. Neck
8	1612381	1	BOLT, Sq. Neck
9	1612369	1	HANDLE, Upper
10	1612370	1	HANDLE, Lower
11	*1612241	1	CLIP, Cover
12	1612233	2	STUD, Handle Mtg.
13	1612291	2	PIN, Cotter Hair
14	1612409	1	CLAMP
15	1612280	2	NUT, Hex Flange, 5/16-18
16	1612407	2	CLAMP, Cable (Double)
17	1960273	2	BOLT, Sq. Neck
18	1612220	2	KNOB, Handle
19	1917372	2	NUT, Hex Locking, 5/16-18
20	*1612322	1	COVER, Control Cable
21	**1612418	1	ROPE, Restraint
22	1612373	1	CONTROL ASSEMBLY
23	1612277	5	NUT, Hex Locking, 1/4-20
24	1612393	1	CONTROL, Throttle
25	1612221	1	WASHER, Curved
26	1612395	1	BAIL, Brake Control
27	1612254	1	SCREW, Hex Hd., 10-32 x 3/8
28	1612419	1	TRACTION LEVER
29	1612327	1	CABLE, Traction
30	1612254	1	SCREW, Hex Hd., 1/4-20 x 1-1/2
31	1612326	1	CLAMP
32	1927429	1	SCREW, Hex Hd., 1/4-20 x 5/8
33	1612306	1	SPRING, Compression
34	*1612320	1	HOUSING, Switch
35	*1612337	1	SWITCH
36	*1612321	1	DECAL, Switch

*Used on Mfg. No. 1691729 Only

**Used on Mfg. No. 1691727 Only



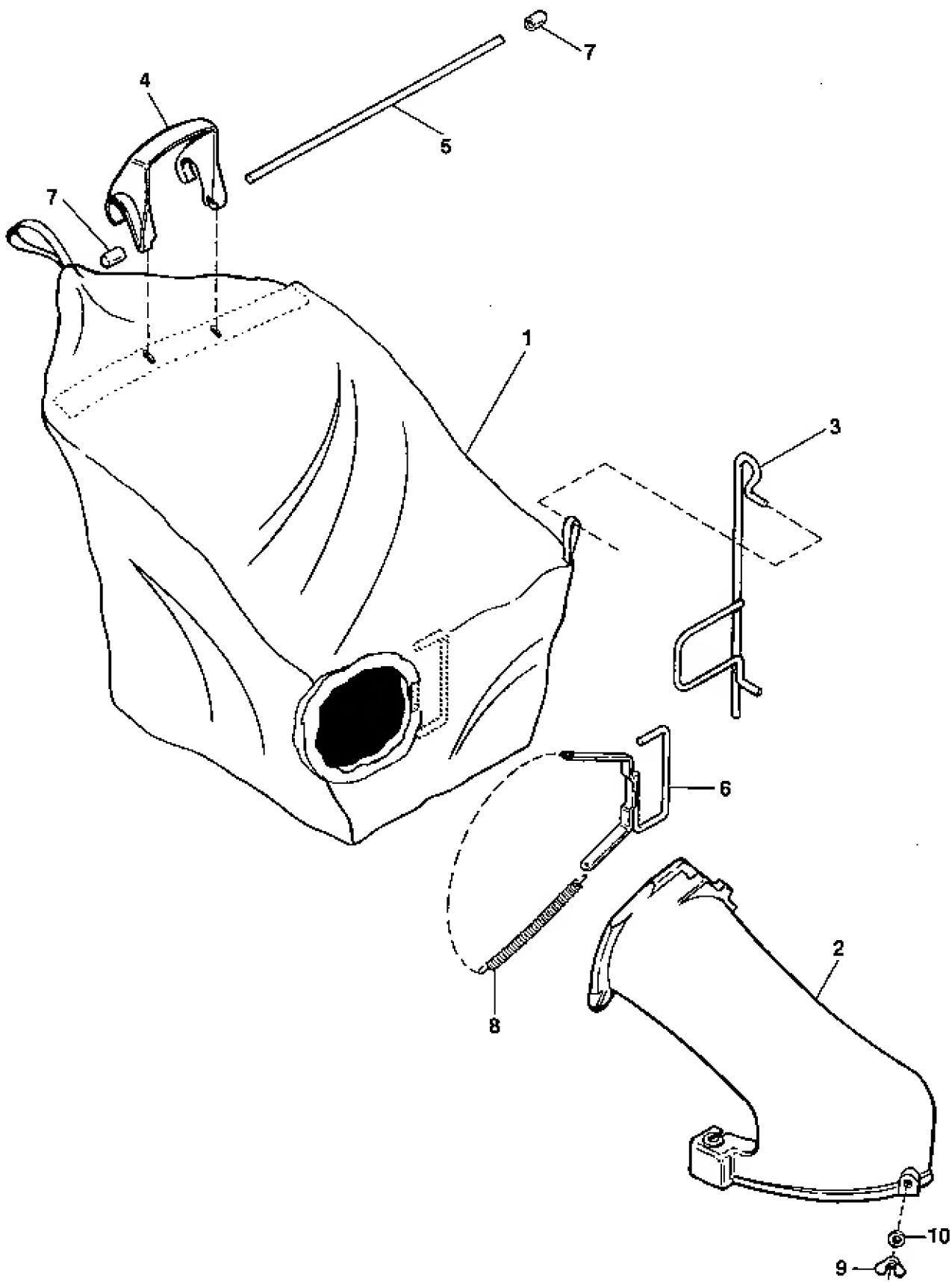
Ref. No.	Part No.	Qty.	Description
1	1612350	1	BAIL, Brake Control
2	1612267	3	SCREW, 1/4-10 x 5/8
3	1612375	3	CLAMP, Pivot Shaft
4	1612181	1	DECAL, Brake Bail
5	1612374	1	SHAFT, Pivot
6	1612349	1	CONTROL, Blade/Brake/Clutch
7	1612381	2	BOLT, Sq. Neck
8	1612369	1	HANDLE, Upper
9	1612277	5	NUT, Hex, 1/4-20
10	1612351	2	SPACER
11	1612394	1	CONTROL, Throttle
12	1931323	2	BOLT, Sq. Neck
13	1927429	1	SCREW, 1/4-20 x 5/8
14	1612419	1	LEVER, Traction
15	1612254	1	SCREW, 1/4-20 x 1-1/2
16	1612327	1	CABLE, Traction
17	1612326	2	CLAMP
18	1960273	2	BOLT
19	1612407	2	CLAMP, Cable Double
20	1612220	2	KNOB, Handle
21	1917372	2	NUT, Hex, 5/16-18
22	1612370	1	HANDLE, Lower
23	1612454	2	WASHER
24	1612291	2	PIN, Cotter
25	1612233	2	STUD
26	1612306	1	SPRING
27	1612280	2	NUT, Flange, 5/16-18



Ref. No.	Part No.	Qty.	Description
1	1612294	1	PIN
2	1612315	1	BEARING, Ball
3	*1612226	1	PULLEY
	**1612338	1	PULLEY
4	1612293	1	PIN
5	1612324	1	WORM & SPACER (Incl. Ref. No. 29)
6	1612316	1	SHAFT, Worm
7	*1612390	1	SHAFT, Drive
	**1612389	1	SHAFT, Drive
8	1612296	1	KEY
9	1612248	2	SEAL
10	1612318	1	GEAR REDUCER HOUSING ASSY. (Incl. Ref. No. 9 and 21)
11	1612299	1	PLUG, Pipe
12	1612311	2	RACE, Bearing
13	1612376	1	GEAR, Helical
14	1612377	1	CONE, Friction
15	1612378	1	DRUM, Clutch
16	1612308	1	FORK, Shift
17	1612292	2	PIN
18	1612261	4	SCREW, Sems Thd., 1/4-20 x 7/8"
19	1612309	1	COVER, Gear Box (Incl. Ref. No. 9 and 21)
20	1612247	1	GASKET
21	1612379	2	BUSHING, Sleeve
22	1612289	1	O-RING
23	1612287	1	Ring
24	*1612403	1	LEVER, Shift
	**1612402	1	LEVER, Shift
25	1612312	1	BEARING, Thrust
26	1612310	1	VENT
27	1612313	1	WASHER
28	1612317	1	BEARING, Needle
29	1612314	1	SPACER

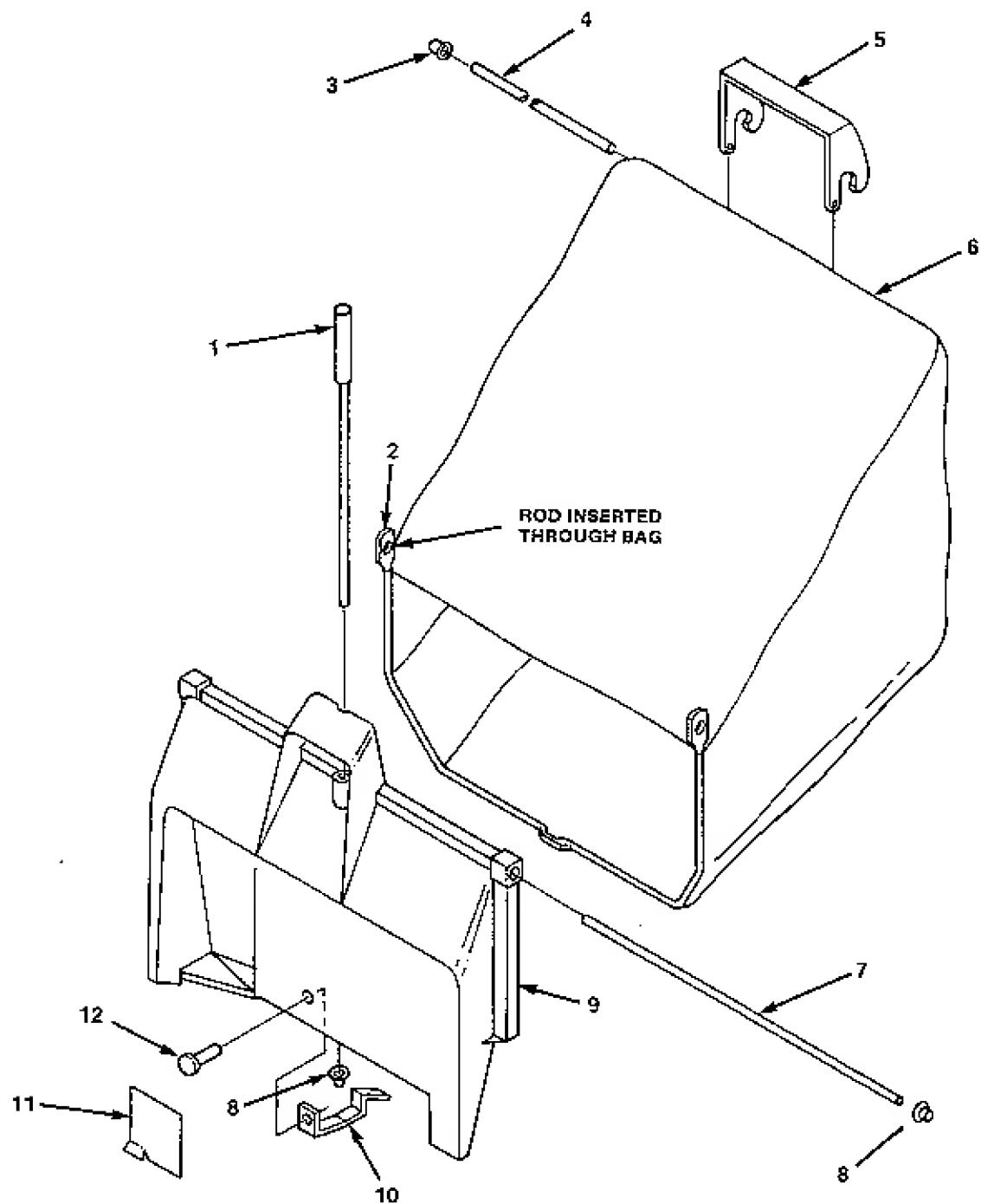
*Used on Mfg. No. 1691726

**Used on Mfg. Nos. 1691727, 1691728, 1691729



Ref. No.	Part No.	Qty.	Description
1	1612463	1	GRASS BAG
2	1612446	1	CHUTE, Discharge
3	1612447	1	SUPPORT, Bag
4	1612448	1	HANDLE, Upper
5	1612449	1	ROD, Upper Handle
6	1612450	1	HANDLE & FRAME
7	1612451	1	RETAINER, Upper Handle
8	1612452	1	SPRING
9	1612453	1	WING NUT
10	1612454	1	WASHER, Flat

Note: All of above parts sold under wholegoods part no. 1691731



Ref. No.	Part No.	Qty.	Description
1	1612354	1	LATCH, Rod
2	1612216	1	ROD, Bag Support
3	1612451	2	RETAINER
4	1612449	1	ROD, Upper Bag
5	1612448	1	HANDLE
6	1612302	1	BAG, Grass (Incl. Ref. No. 3, Qty. 1; Ref. No. 8, Qty. 1)
7	1612230	1	ROD, Bag Hinge
8	1612279	3	NUT, Pal
9	1612355	1	ADAPTOR, Bag
10	1612238	1	LATCH
11	1612245	1	DEFLECTOR
12	1612298	1	RIVET

Simplicity

Simplicity

Outdoor Power
Equipment



**This is a supplement to the
1500 Series Walk-Behind
Mowers & Attachments
Parts Manual (TP-1140)
and will be included in
the next update.**

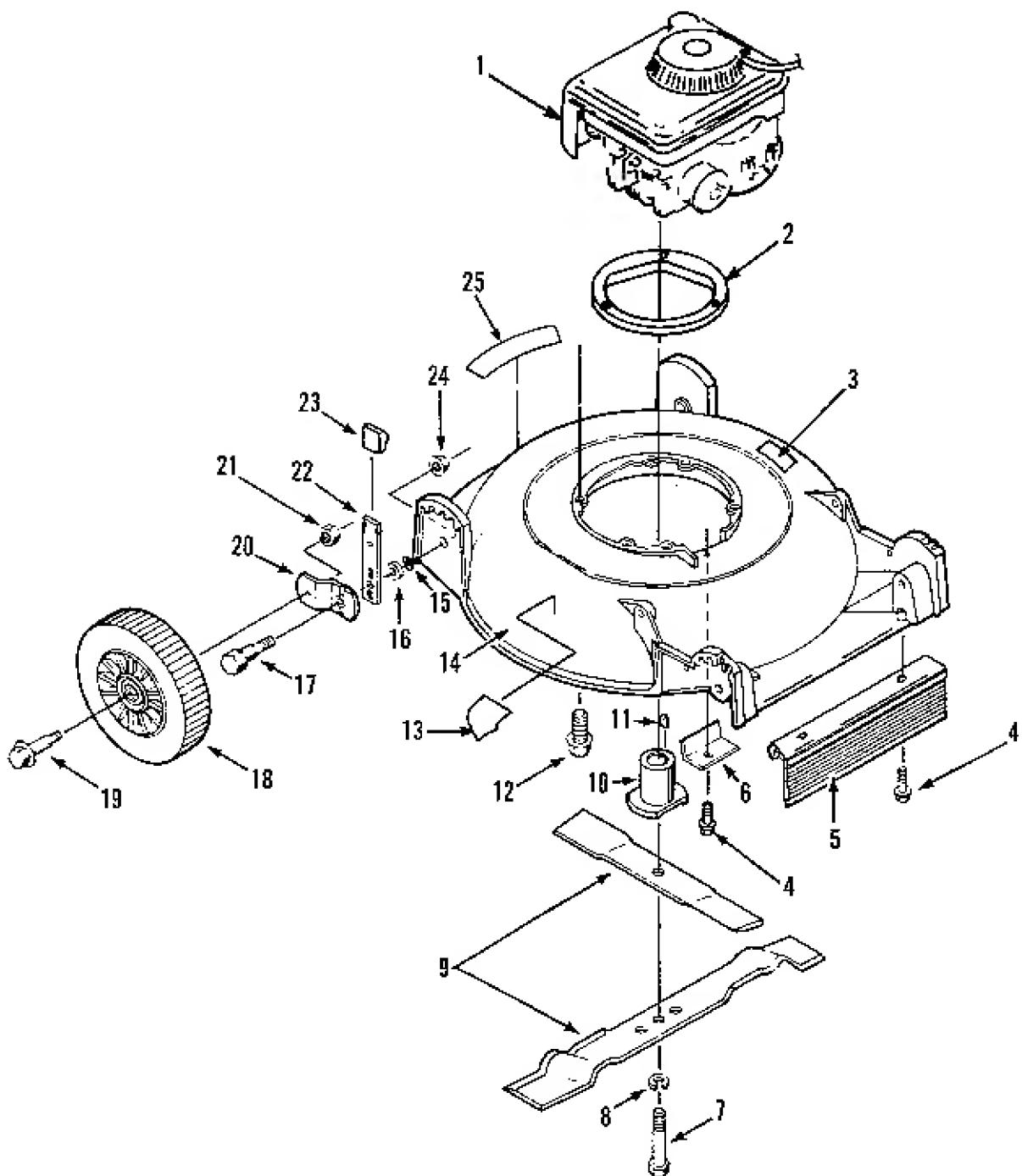
TP-1140-S
(Supplement to TP-1140)
PRINTED IN U.S.A.
6/90

MODEL 1570PS
MFG. NO. 1691922

MODEL 1575PP
MFG. NO. 1691923

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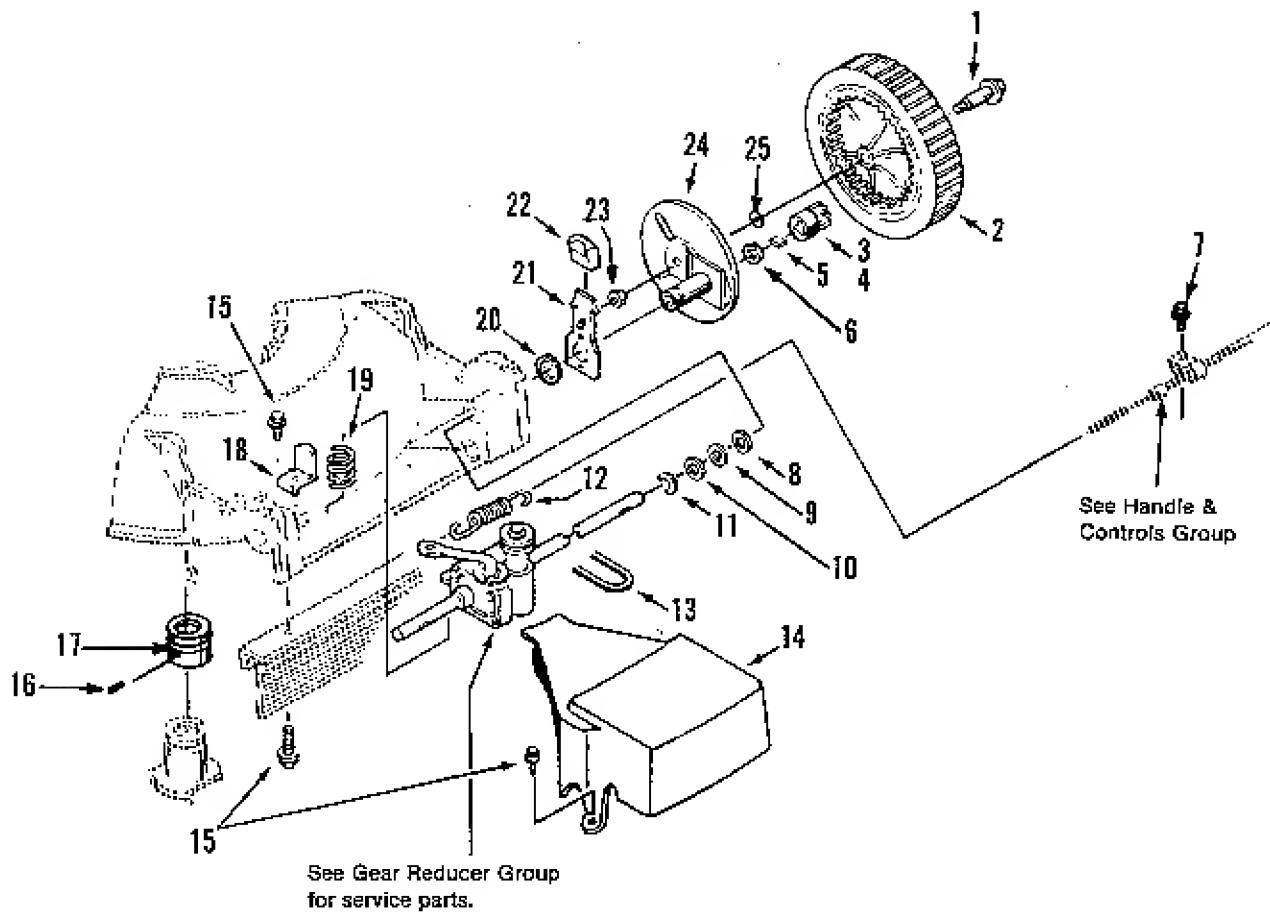
ENGINE, WHEELS & DECK GROUP	2
REAR WHEELS GROUP (Mfg. No. 1691923 Only)	4
HANDLE & CONTROLS GROUP	6
GEAR REDUCER SERVICE PARTS (Mfg. No. 1691923 Only)	8



NOTE: Use standard hardware
torque spec. chart unless otherwise noted.

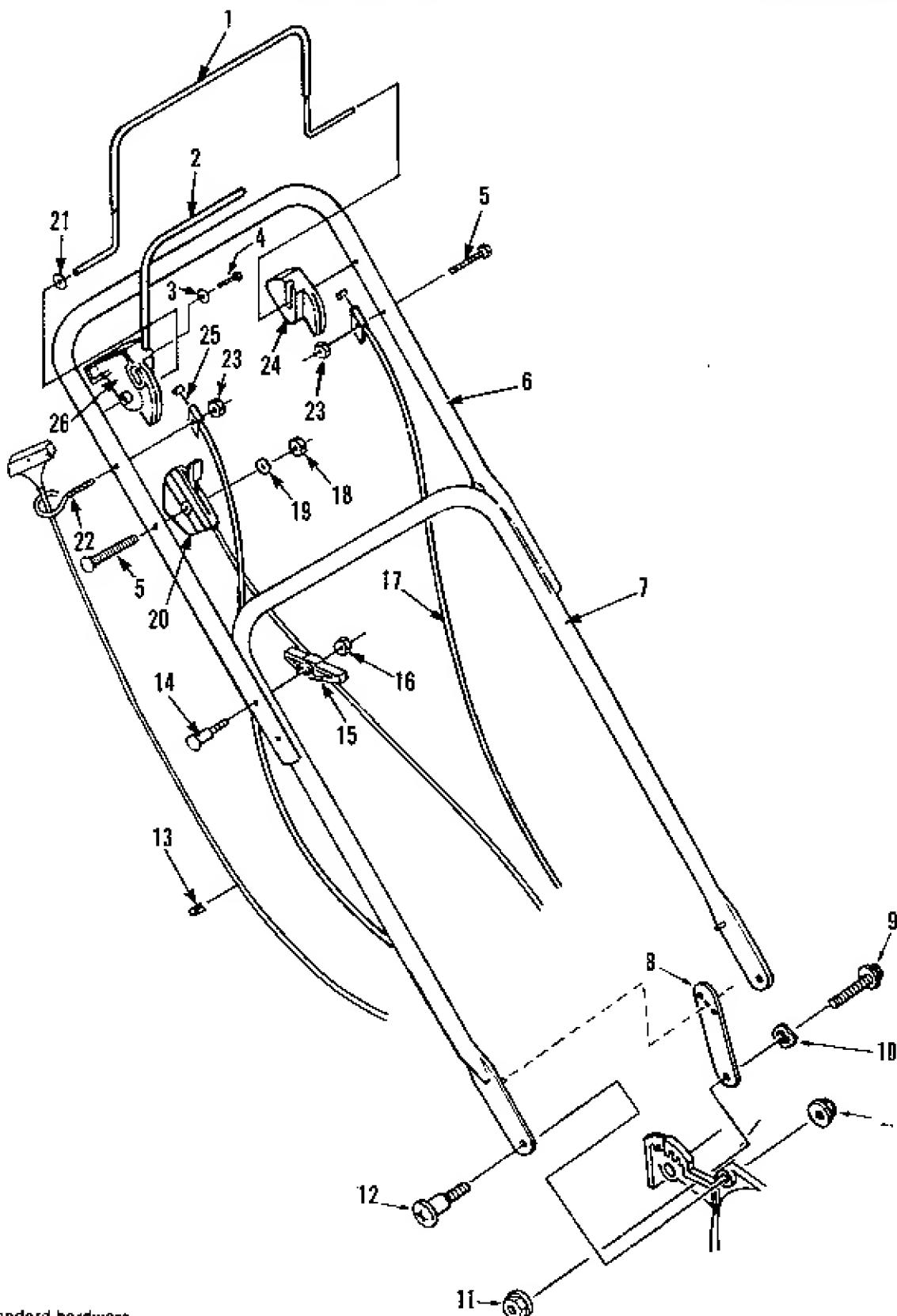
Ref. No.	Part No.	Qty.	Description
1		1	ENGINE, 5.0 HP
		1	ENGINE, 4.0 HP Quantum
2	1612410	1	RING, Engine
3	1706207	1	DECAL, Warning
4	1925592	3	SCREW, Hex Hd., 1/4-20 x 3/4
5	1706215	1	SHIELD, Rear
6	1706213	1	COVER, Belt Opening (1691922 Only)
7	927322	1	SCREW, 3/8-24 x 2
8	1916965	1	WASHER, Lock, 3/8
9	1706167	1	BLADE KIT
10	1706214	1	ADAPTER, Blade
11	918312	2	KEY
12	1930598	3	SCREW, Hex Hd., 3/8-16 x 1-1/2
13	1706208	1	DECAL, Warning
14	1706206	1	DECK, 20" Push
	1706209	1	DECK, 20" Self-Propelled
15	1706204	4	WASHER, 5/16 (Qty. 2 on 1691923)
16	1612225	4	SPACER (Qty. 2 on 1691923)
17	1612235	4	BOLT, Hex Hd., 5/16-18 (Qty. 2 on 1691923)
18	1706203	4	WHEEL & TIRE ASSY., (Qty. 2 on 1691923)
19	1612385	4	BOLT, Axle, 3/8-16 (Qty. 2 on 1691923)
20	1612346	4	ARM, Wheel Adjustment (Qty. 2 on 1691923)
21	1960251	4	NUT, 3/8-16 (Qty. 2 on 1691923)
22	1612305	4	SPRING (Qty. 2 on 1691923)
23	1612215	4	KNOB (Qty. 2 on 1691923)
24	1935048	4	NUT, Flange, 5/16-18 (Qty. 2 on 1691923)
25	1612183	1	DECAL, 20" Simplicity

*See your authorized engine dealer for parts and service.



NOTE: Use standard hardware
torque spec. chart unless
otherwise noted.

Ref. No.	Part No.	Qty.	Description
1	1612385	2	BOLT, Axle, 3/8-16
2	1612398	2	WHEEL & TIRE
3	1612208	1	PINION, R.H.
4	1612209	1	PINION, L.H.
5	1612213	2	PAWL, Pinion
6	1612222	2	WASHER
7	1706221	1	SCREW, Thread Rolling
8	1612266	2	WASHER
9	1612214	4	WASHER, Shim
10	173668	2	WASHER
11	1612288	2	RING, Eaton
12	1612246	1	SPRING, Extension
13	1612157	1	BELT, Drive
14	1706220	1	COVER, Drive
15	1925592	2	SCREW, Hex Hd., 1/4-20 x 3/4
16	1706219	1	SCREW, Set
17	1706218	1	PULLEY, Drive
18	1706216	1	BRACKET
19	1706205	1	SPRING
20	1612228	2	SPACER
21	1612347	2	SPRING, Index
22	1612215	2	KNOB
23	1960251	2	NUT, 3/8-16
24	1612304	2	SUPPORT, Drive Wheel
25	1612242	2	WASHER

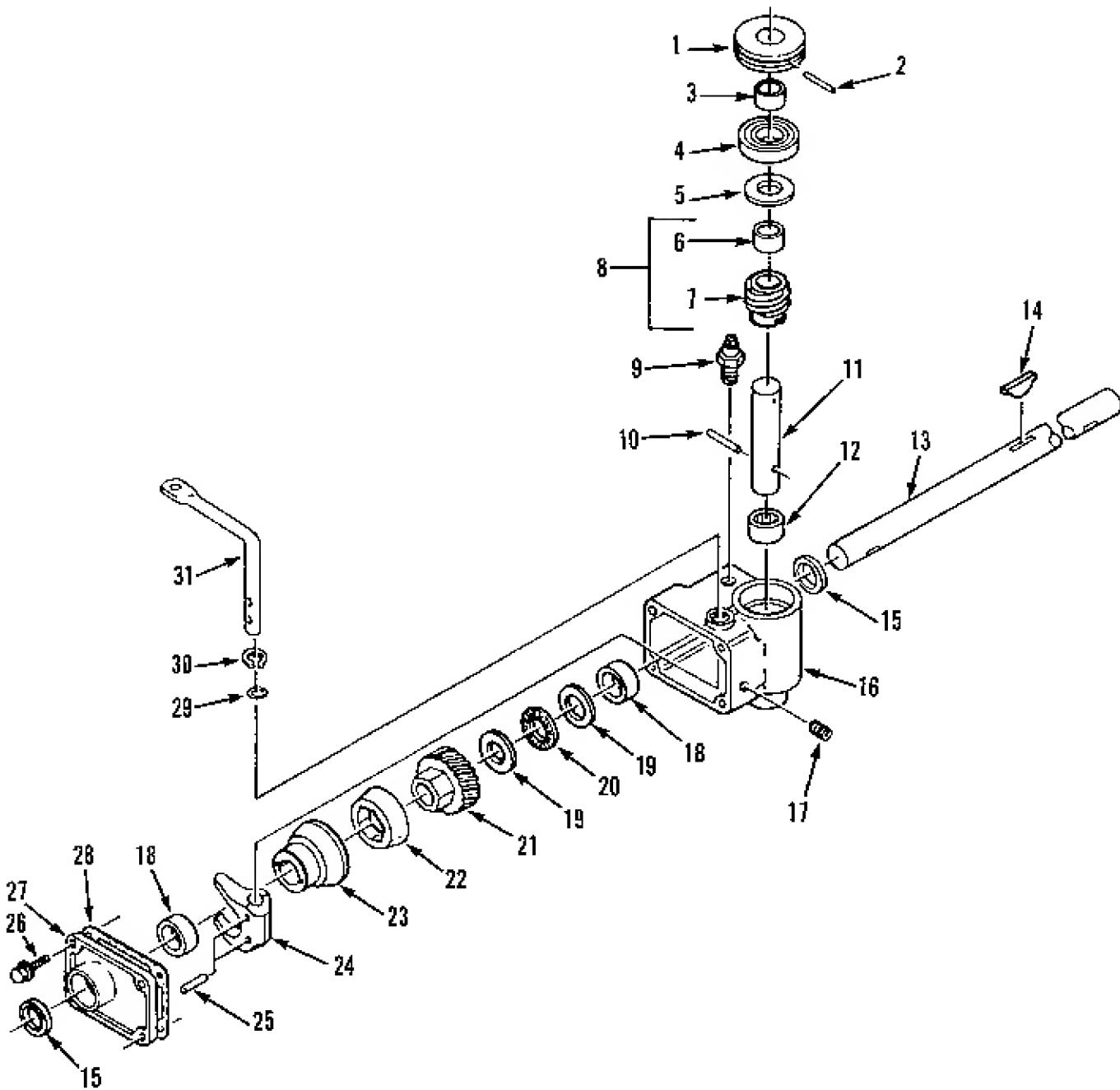


NOTE: Use standard hardware
torque spec. chart unless
otherwise noted.

Ref. No.	Part No.	Qty.	Description
1	*1612359	1	BAIL, Brake Control
	**1612360	1	BAIL, Brake Control
2	**1612404	1	TRACTION LEVER
3	**1910531	1	WASHER, #10
4	1960034	1	SCREW, Hex Hd., #10-16 x 1/2
5	1706229	2	SCREW, Truss Hd., Phillips (Qty. 1 on 1691922)
6	1706233	1	HANDLE, Upper
7	1706234	1	HANDLE, Lower, w/Pin
8	1706236	2	SUPPORT
9	1706238	2	BOLT
10	1706237	2	WASHER
11	1935048	4	NUT, Hex, Flange, 5/16-18
12	1706235	2	BOLT
13	1612319	1	STOP, Rope
14	1960273	2	BOLT
15	1612220	2	KNOB, Handle
16	1917372	2	NUT, Hex Locking, 5/16-19
17	**1706232	1	CONTROL, Engine
18	1916622	1	NUT, Hex, 1/4-20
19	1921880	1	WASHER
20	1706230	1	CONTROL, Throttle
21	**1706204	1	WASHER, 5/16
22	1612366	1	EYEBOLT, 1/4-20 x 1-3/4
23	1923358	2	NUT, Hex, 1/4-20 (Qty. 1 on 1691922)
24	**1612365	1	ACTUATOR, L.H.
25	**1706231	1	CONTROL, Engine
	**1706222	1	CONTROL, Engine
26	*1706228	1	ACTUATOR, R.H.
	**1612364	1	ACTUATOR, R.H.

*Used on Mfg. No. 1691922 only.

**Used on Mfg. No. 1691923 only.



NOTE: Use standard hardware
torque spec. chart unless
otherwise noted.

Ref. No.	Part No.	Qty.	Description
1	1706239	1	PULLEY
2	1612293	1	PIN
3	1706243	1	WASHER
4	1665521	1	BEARING
5	1612313	1	WASHER
6	1612314	1	SPACER
7		1	WORM GEAR (See Ref. No. 8)
8	1612324	1	WORM GEAR ASSY. (Incl. Ref. Nos. 6 & 7)
9	1612310	1	VENT
10	1612294	1	PIN
11	1706242	1	SHAFT, Worm
12	1612317	1	BEARING, Needle
13	1612390	1	SHAFT, Drive
14	905119	1	KEY
15	1612248	2	SEAL
16	1612318	1	GEAR REDUCER ASSY. (Incl. Ref. Nos. 12, 15 & 18)
17	917673	1	PLUG
18	1612379	2	BUSHING
19	1612311	2	RACE, Bearing
20	1612312	1	BEARING, Thrust
21	1706240	1	GEAR
22	1612377	1	CONE, Friction
23	1706241	1	DRUM, Clutch
24	1612308	1	FORK, Shift
25	1612292	2	PIN
26	1930594	4	SCREW
27	1612309	1	COVER, Gear Box (Incl. Ref. Nos. 15 & 18)
28	1612247	1	GASKET
29	170837	1	O-RING
30	1612287	1	SNAP RING
31	1612403	1	LEVER, Shift

**TORQUE SPECIFICATIONS FOR
STANDARD MACHINE HARDWARE
TOLERANCE $\pm 20\%$**

SIZE	SAE GRADE #2		SAE GRADE #5		SAE GRADE #8	
						
	In./Lbs. Ft./Lbs.	Nm.	In./Lbs. Ft./Lbs.	Nm.	In./Lbs. Ft./Lbs.	Nm.
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.
5/16-18	11	15.	17	23.1	25	34.
5/16-24	12	16.3	19	25.8	25	34.
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.
7/16-14	30	40.8	50	68.	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.	75	102.	110	149.6
1/2-20	56	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.
9/16-18	76	102.	120	163.2	170	231.2
5/8-11	90	122.4	150	204.	220	299.2
5/8-18	100	136.	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.
3/4-16	180	244.8	300	408.	420	571.2
7/8-9	140	190.4	400	544.	600	816.
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,224.
1-12	240	326.4	640	870.4	1,000	1,360.

NOTE:

1. These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
 - a. For prevailing torque locknuts - use 65% of grade 5 torques.
 - b. For flange whizlock nuts (and screws) - use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings all torque values must meet this specification.

**BOLT HEAD MARKING
S.A.E. GRADE:**



